REMARKS

The Office Action dated October 20, 2006, has been received and its contents carefully noted.

In view of the foregoing amendments and following representations, reconsideration and allowance are respectfully requested.

To overcome the objection to the drawings, reference number - - 20 - - has been added to the specification. Thus, no corrected drawings are required.

As to the objection to the specification owing to formalities, applicant requests that the submission of amendments be held in abeyance until the indication of allowable subject matter.

To address the Examiner's first point regarding the term "noninflammable", and, by extension, "noninflammability", it is noted that the terms should have been idiomatically written as - nonflammable-- and - - nonflammability--, respectively, in accordance with current English usage. Such will be corrected at the time a substitute specification is submitted.

The title and the claims have been amended to change the phrase "mostly consisting of" to read -- containing as a main component--, in accordance with M.P.E.P 2111.03.

To overcome the rejection of claim 3 as being indefinite, claim 3 has been amended.

To assist in understanding the novel and nonobvious features of the present invention, applicant provides the following summary.

The present invention relates to a method of forming noninflammable building materials, comprising a step of mixing magnesium oxide as a main component and vegetable powder or mineral powder with water and a step of heating and pressing at high temperature and high pressure to form noninflammable board, especially characterized in that:

i) the building material made according to the present invention does not emit any poisonous gas such as Cl2 which can be generated when MgCl2 is used as a binding agent or a hardening agent, generally used in the prior art;

ii) in addition, the building materials according to the present invention can be produced in large quantities because the building boards can be made within 1-10 minutes which is marvelous speed as compared with that in any other prior methods; and

iii) Since the prior method takes long time to produce a complete product, the wet admixture is placed in the mold with the opened upper surface thereof. Thus, whereas one surface of the product is smoothly made, the other surface which is opened side of the mold is very rough. Accordingly the products according to the prior method should be passed through the processing step for the rough surface. However, the present method can produce the building board the both surfaces of which are very smooth because the wet admixture can be injected into the mold with a cover to make a closed mold and then two smooth surfaces of the board.

Considering the above characteristics of the present invention, applicant submits that the claimed invention defines over each of the applied references as follows.

To overcome the rejection of Claim 5 as being anticipated by Billwiller `321, claim 5 has been amended to still further define thereover

1) Comparing the claimed invention with Billwiller `321

It is understand that Billwiller `321 is directed to an insulating block, which can be made by molding a moistened mixture of finely-divided vegetable fiber and magnesia (magnesium oxide) into blocks in molds and subjecting the molded

blocks to pressure during hardening. The insulating blocks so molded must be impregnated with a mineral oil so as to fill the pores of the blocks with the mineral oil containing a small amount of an aluminum soap and/or sulfur for enhancing the insulating and reducing the water-absorbing properties of the blocks.

Furthermore, in molding the insulating block according to Billwiller '321, the block is subjected only to pressure until the same is hardened.

However, in the process described and claimed in Claim 5, a mixture of finely divided vegetable powder or fiber, or mineral fiber or powder and pulverized magnesia, the mixture being moistened, is introduced into a preheated mold and compressed under high pressure in an extruder with heating at a high temperature in order to harden rapidly the blocks so molded. Applicant believes that the blocks defined in Claim 5 would have fine and close inner structures due to the compression thereof at a high temperature under high pressure, and therefore, the blocks can be quickly hardened and their inner pores would need not to be impregnated with mineral oils.

That is, although Billwiller `321 discloses an invention relating to forming an insulating block by providing a wet mixture or magnesia and vegetable fiber and magnesia compressing the mixture to obtain desired shape of the block, the cited invention does not employ the step of pressing such a wet mass under high pressure at a high temperature, it is distinguishable from Claim 5 in the subject application in view of the inherent nature of the resulting product. Especially, given that Billwiller `321 takes the time as long as 1216 hours at the high pressure of 400kg/cm2 in order to produce the final products. That is, Billwiller `321 can **not** be put to practical use as well as to have two smooth surfaces as mentioned for the present invention.

Accordingly, Applicant submits that Billwiller `321 not only has little to do with claim 5, but would have failed to teach the claimed elements of Claim 5.

To overcome the rejection of claims 1 and 2 over Billwiller `321 modified in view of Ghosh et al. `436, please note the following:

1) Billwiller `321 is discussed above; and

2) Ghosh et al. `436 is discussed as follows.

It is noted that Ghosh et al. `436 discloses a method of forming an organic layer on a substrate forming part of an organic light-emitting device (OLED), wherein a heated mixture of sublimable organic material powder and nonsublimable but thermally conductive ceramic material powder is punched into a solid pellet in a die while applying pressure. This citation teaches a method of continuously consolidating organic powder into a solid pellet for use in making an organic layer on a substrate forming an OLED.

The product obtainable from Ghosh et al. `436 requires a high purity and accuracy. In other words, the methods of molding a product in a molding machine or tool including a molding die are conventionally similar to each other, but those methods should be in principle differentiated from each other depending mainly on the type/state of the material(s) to be fed into the molding machine or tool as well as the type of the desired final product.

Therefore, Applicant argues that the method of forming an organic layer on an OLED substrate as disclosed in Ghosh et al. `436 is **not** applicable as it is to the method of molding "a building material" defined in Claim 1 and 2 in the subject

application. That is, Applicant is of the opinion that the claimed features of Claims 1 and 2 would not have been obvious to a person having ordinary skill in the art at the time of the invention, even if Ghosh et al. `436 were combined with Billwiller `321.

To overcome the rejection of claim 3 over Billwiller `321 modified in view of Suh `773, please note the following:

1) Billwiller `321 is discussed above; and

2) Suh `773 is discussed as follows.

In brief, Suh `773 discloses a method of injection molding wherein when injecting molding material into an injection mold cavity, a portion of the mold cavity is continuously heated during the injection to prevent the molecules of the injected material from solidifying into a specific orientation and controlling the cooling rate of one portion of the mold cavity to prevent secondary flow of the injected material between portions of the mold cavity. In other words, in this cited method, early injected material is thoroughly warmed to maintain its flowability thereby not so as to be rapidly solidified, and later injected material is thoroughly controlled to be cooled thereby not so as to be lately solidified.

In other words, Suh `773 discloses a method of cooling the material to be solidified while the method of the present invention needs to heat and press at high temperature and pressure for rapidly hardening. Accordingly, the claimed inventions and the teachings of Suh `773 are contrary to each other.

In view of those differences, Applicant argues that neither teachings nor suggestions are found in Suh `773 with respect to applicant's claimed method of compressing a hydrated mixture of magnesia and a vegetable or mineral filler under high pressure at a high temperature to obtain a rapidly hardened building material, as set forth in Claim 3 of the subject application; rather, it would have taught a person having ordinary skill in the art directly away from the invention; thus, Billwiller `321, whether considered solely or in combination with Suh `773 would have been irrelevant to a person having ordinary skill in the art with respect to Claim 3, and cannot be the basis for a rejection of Claim 3.

To overcome the rejection of claim 4 over Billwiller `321 modified in view of Takahashi '102, please note the following:

1) Billwiller `321 is discussed above; and

2) Takahashi '102 is discussed as follows.

It can be clearly recognized that Takahashi '102 discloses a system for continuously manufacturing elongate ceramic having

continuous arrangement of an extruder, a drying machine, a cutter and a firing furnace. This citation does not mention a method or a system wherein compressing and heating are simultaneously performed during extruding the building material out of an extruder, as described in the disclosure and in Claim 4.

In addition, in Takahashi '102 the heating means to bake ceramic such as in making a pottery, differing from that the heating in the present invention is to emit vapor acting as a binder to produce rapidly building boards.

Therefore, Applicant submits that Claim 4 would not have been obvious over Billwiller `321 as modified in view of Takahashi '102.

To support the novelty and nonobviousness of the claimed excellent features of the present invention, applicant encloses experimental data for the building boards as produced according to the present invention with varying of the temperature and the pressures, referring as to the Table 1 of Appendix A.

In sum, it is submitted that each of independent claims 1-5 is patentable over the prior art, and early action and allowance is respectfully requested.

Please charge Deposit Account No. 19-2105 in the amount of $510.00 for a three-month extension of time (small entity).

It is believed that no additional fee is due. Should that determination be incorrect, Patent Office officials are hereby authorized to charge any deficiencies to our Deposit Account No. 19-2105 and to notify undersigned counsel in due course.

Should any outstanding formal matters or other issues remain, please telephone Terrence Brown at 703-684-5600 to resolve such.

Respectfully submitted,

Date:_____ By:_____

Terrence L.B. Brown
Attorney for Applicant
Reg. No. 32,685

SHLESINGER, ARKWRIGHT & GARVEY LLP
1420 King Street, Suite 600
Alexandria, Virginia 22314
(703) 684-5600

Sb

APPENDIX A

Table 1.

Ex.	P. Kg/cm²	Thickness (mm)	Density (g/cm3)	Percentage of water content(%)	Percentage of water absorption(%)	Expansion factor of thickness(%)	Flexural strength(MPa)
1	100	5.03	1.43	4.48	31.40	14.21	20.17
2	150	4.64	1.55	4.55	28.83	19.22	19.91
3	200	4.75	1.49	3.90	30.17	13.44	15.97
4	100	4.95	1.48	3.96	34.94	16.12	18.75
5	150	4.89	1.54	4.18	32.71	19.12	22.44
6	200	4.58	1.59	3.58	31.91	24.29	19.40

Serial No. 10/733,770
Amendment dated April 20, 2007
In Reply of Office Action dated October 20, 2006

CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office to 571-273-8300(Patents)/571-273-9103(Trademarks)

on X 4/20/07
Date

X D. Stacy
Signature

X D. STACY
Typed or printed name of person signing certificate

703-684-5600
Telephone Number